

## UNITED STATES PATENT AND TRADEMARK OFFICE

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 PUBLIC HEARING ON TECHNOLOGICAL :  
 PROTECTION SYSTEMS FOR DIGITIZED :  
 COPYRIGHTED WORKS :  
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Tuesday, February 4, 2003  
 2121 Crystal Drive,  
 Crystal Park Two  
 Patent Theater, Second Floor  
 Arlington, Virginia 22202

The meeting convened, pursuant to notice, at 9:10 a.m.

## PTO MEMBERS PRESENT:

JOHN DUDAS, Deputy Under Secretary of  
 Commerce for Intellectual Property  
 and Deputy Director of the United  
 States Patent and Trademark Office

CHRIS J. KATOPIS, Deputy Administrator  
 for External Affairs

MICHAEL SHAPIRO

VELICA STEADMAN

## PANEL MEMBERS PRESENT:

MARK BOHANNON, Software & Information  
 Industry Association

TROY DOW, Motion Picture Association of  
 America

BRUCE FUNKHOUSER, Copyright Clearance  
 Center, Inc.

WILLIAM KREPICK, Macrovision Corporation

MICHAEL MIRON, ContentGuard

STEVEN POTASH, OverDrive, Inc.

## TABLE OF CONTENTS

Agenda Item	Page
I. Welcome and Opening Remarks.....	3
II. Introduction.....	5
III. William Krepick.....	6
IV. Steven Potash.....	23
v. Michael Miron.....	35
VI. Troy Dow.....	46
VII. Bruce Funkhouser.....	58
VIII. Mark Bohannon.....	74
IX. Conclusion.....	92

1 P R O C E E D I N G S

2 I. WELCOME AND OPENING REMARKS

3 MR. DUDAS: Good morning, everyone.

4 Thank you all for coming. Many of you out there  
5 are familiar faces, but for those of you who I have  
6 not met, I'm John Dudas, the Deputy Under Secretary  
7 of Intellectual Property and Deputy Director for  
8 the United States Patent and Trademark Office.

9 As you know, the Patent and Trademark  
10 Office is hosting this morning's hearing in order  
11 to solicit input for this report we are preparing  
12 as part of the Technology Education And Copyright  
13 Harmonization Act of 2002. The TEACH Act, as it's  
14 called which was signed into law last November,  
15 updates the Copyright Act in order to spur the  
16 development of business education. It also  
17 introduces new safeguards to limit the risks to  
18 copyright owners that are inherent to exploiting  
19 works in the digital field.

20 In order to help safeguard copyright  
21 products, the TEACH Act requires the Patent and  
22 Trademark Office, after consultation with the

1 Copyright Office and the public at large, to submit  
2 to the House and Senate Judiciary Committees a  
3 report on technological protection systems for  
4 digitized copyrighted works. The Act specifically  
5 directs to us include information on, and I'll  
6 quote here: Technological protection systems that  
7 have been implemented, are available for  
8 implementation, are proposed to be developed to  
9 protect digitized copyrighted works and protect  
10 infringement.

11 Congress has made clear that our report  
12 is intended solely for information purposes, and  
13 they specifically directed us to exclude any  
14 recommendations and comparative assessments of  
15 commercially-available products that may be  
16 mentioned in the report. Those are, in effect, our  
17 marching orders, and as that's what brings us here  
18 today.

19 We're very pleased to have a  
20 distinguished group of witness representing a  
21 diverse cross-section of content and user  
22 communities to explore this issue. I don't have to

1 tell any of you here that digital rights management  
2 is a difficult issue with potentially enormous  
3 ramifications.

4               So on behalf of Under Secretary Rogan,  
5 we appreciate your input and feedback, and again,  
6 thank you all for your participation in this  
7 morning's hearing.

8               Now I'd like to turn it over to Chris  
9 Katopis who is our Deputy Administrator for  
10 External Affairs, head of Congressional Relations,  
11 and overall good guy, who will moderate the  
12 proceedings.

13                               II. INTRODUCTION

14               MR. KATOPIS: Thank you, John. As you  
15 mentioned, there are a lot of familiar faces here  
16 this morning. So you all know the complexity and  
17 sometimes contentiousness of this issue; however,  
18 we're very pleased at the PTO to have the faith of  
19 Congress in preparing this report and being able to  
20 utilize all the expertise, the legal expertise, but  
21 although also the engineering and scientific  
22 expertise of the rank and file of the PTO in

1 putting this together.

2           We are fortunate, also, to have a very  
3 talented panel with us this morning that will  
4 comment on what is the state of the art in many of  
5 these technologies and what's happening in this  
6 field, and with that said, let's begin with William  
7 Krepick, who is President and CEO of Macrovision  
8 Corporation.

9           III. WILLIAM KREPICK

10           MR. KREPICK: Thank you, Chris, and  
11 thank you very much for coming this morning. We  
12 appreciate the opportunity for Macrovision to  
13 present our point of view on this important PTO  
14 hearing.

15           As a leading intellectual property  
16 protection and digital rights management company,  
17 we're in the unique position as a neutral entity  
18 between the consumer electronics hardware community  
19 and the content market community. As you are all  
20 aware, there is spirited debate over digital rights  
21 management and copy protection technologies among  
22 these two industry groups as well as various

1 consumer groups and politicians.

2           At the end of the day, one must evaluate  
3 existing and proposed intellectual property rights  
4 management solutions based not only on the  
5 effectiveness, security, flexibility, and  
6 implementation costs of these technologies, but  
7 also on their transparency and the ease of use by  
8 our consumers. Even more, the solutions must be  
9 judged according to how well they facilitate the  
10 protection of accepted digital rights for everyone,  
11 from content creators and distributors to consumer  
12 electronics firms and consumers.

13           Since 1985, Macrovision has pioneered  
14 copy protection and rights management solutions for  
15 video, pay-per-view, DVD, music CDs, and consumer  
16 and enterprise software. We have been working  
17 cooperatively with various industry groups such as  
18 the Copy Protection Technical Working Group, the  
19 Broadcast Protection Discussion Group, the DVD Copy  
20 Control Association, and the Video Watermarking  
21 Companies to design solutions to address the  
22 intellectual property protection challenges posed

1 in both digital and analog environments.

2           The Digital Millennium Copyright Act  
3 effectively demonstrated that positive government  
4 legislation and enforcement actions can effectively  
5 balance the diverse interests of consumers,  
6 consumer electronics companies, PC companies, and  
7 copyright on content owners. Since 1985,  
8 Macrovision has copy protected over 3.5 billion VHS  
9 video cassettes, and in the last four years, over a  
10 billion DVDs. Our copy protection technology is  
11 imbedded in virtually all DVD players and over 75  
12 million digital set-top boxes, including over 90  
13 percent of those used in the United Kingdom, North  
14 America, and Japan. We have copy protected over  
15 200 million CD ROMs containing PC games.

16           These statistics and our company's  
17 extensive copy protection customer base, which  
18 includes all of the Hollywood studios, hardware  
19 suppliers to the satellite and cable TV industry,  
20 major PC games publishers, and the optical media  
21 manufacturing infrastructure have resulted from a  
22 sustained 17-year focus on developing effective



1 copy protection and DRM technologies. DRM  
2 technologies comprise various software-based  
3 electronic and security solutions that are designed  
4 to enable copyright owners to license and market  
5 their copyrighted content across a wide variety of  
6 mediums, whether that be physical goods, such as  
7 CDs and DVDs, wired or wireless electronic  
8 transmissions, or the internet.

9 Copy protection is a critical element of  
10 most digital rights management technologies. In  
11 the past few years, the world has changed  
12 dramatically from one in which most intellectual  
13 property and copyright theft occurred when people  
14 would make xerox copies or simply shoplift physical  
15 items. In today's digital world, we are faced with  
16 widespread electronic content shoplifting. Today's  
17 shoplifters can achieve this with her their PCs in  
18 the privacy of their own home where they are immune  
19 from prosecution.

20 In the physical world, many retailers  
21 estimate that they lose about two percent of their  
22 revenues to shoplifters. In the digital world, the

1 pilferage is far higher. A recent example from one  
2 of our application software customers will drive  
3 this point home: The software publisher converted  
4 to our Safecast DRM technology to implement an  
5 authorization and authentication program to ensure  
6 that consumers were abiding by the licensing terms.  
7 Part of this solution involves serializing the CDs  
8 and allowing only one unique serial number to  
9 control the download of the software to the  
10 consumer's PC.

11           Within the first few weeks of launching  
12 this new product, over 20,000 authorization  
13 attempts were tied to five specific serial numbers.  
14 This shows you the frightening speed and scope of  
15 business that can be lost if digital rights  
16 management technologies are not supported, or  
17 alternatively, if circumvention techniques are  
18 allowed to proliferate. Imagine only five  
19 legitimate CDs accounting for 20,000 illegitimate  
20 taps to get software. The worst thing is that this  
21 so-called innocent electronic copying would go  
22 sight unseen unless DRM and copy protection

1 technology is used to ensure licensing compliance.

2           National consumers surveys have revealed  
3 that between 10 and 20 percent of the population  
4 routinely engages in some type of unauthorized  
5 video copying, whether using CD burners, video  
6 cassette recorders, or file-sharing service. The  
7 losses in the software and music business appear to  
8 be far higher. Many surveys have confirmed that a  
9 high percentage of teenagers and college students  
10 utilize CD burners to copy music albums and also to  
11 share music files over the internet with  
12 peer-to-peer file-sharing services like Kazot,  
13 Livewire, and Morphiux, all stepchildren of the  
14 infamous Napster.

15           Recently, 321 studios, a new company,  
16 has attracted a lot of attention and the content  
17 owner lawsuit with their DVD copying software that  
18 is purported to allow consumers to make copies of  
19 DVD movies by bypassing industry standard  
20 encryption technology. With the advent of mass  
21 consumer broadband access, the requirement for  
22 enhanced content protection and secured DRM

1 solutions has become paramount if owners of premium  
2 digital content are going to use this medium.

3           The issues surrounding digital content  
4 delivery have become more critical. How do we  
5 safeguard digital content delivery and access? How  
6 do we protect the rights of the content owners once  
7 the content has been accessed? How do we enable  
8 flexible usage models or redistribution models so  
9 content owners and their distribution and consumer  
10 channels can optimize the advantages offered in  
11 this digital age? Without a secure solution,  
12 content owners unlikely to authorize the  
13 transmission of their premium content, thereby  
14 limiting growth in the digital marketplace.

15           The solution of these problems is  
16 twofold: Effective content protection and DRM  
17 technologies and a political, slash, legal  
18 structure that protects copyright holders and  
19 technologists and consumer electronics  
20 manufacturers. One of the most dubious phrases  
21 used in the current interindustry debates is that  
22 of allowing copying for, quote-unquote, fair use or

1 non-commercial benefit. If someone makes a copy of  
2 a DVD or TV program and puts it on the web, it may  
3 well have been done for non-commercial benefit;  
4 however, it is unlikely that rights owners and the  
5 entire supply chain, for that matter, who may lose  
6 tens of thousands of displaced sales opportunities  
7 as a result, will feel that they have not suffered  
8 a significant commercial loss and infringement on  
9 their copyright.

10 Fair use is often used as a smokescreen  
11 by consumer rights groups to deride copy protection  
12 and DRM technologies. These activists often state  
13 that they have a right to make backup copies once  
14 they have purchased the first article. In fact,  
15 fair use laws were intended to provide the consumer  
16 with the right to do what they wanted with the  
17 original article. Fair use was never intended to  
18 allow purchase of the content to make unlimited  
19 copies. Fair use should not extend to making  
20 unlimited additional copies or electronically  
21 transferring a copy of the original to an internet  
22 file-sharing service.

1           In the digital world, this fair use  
2 concept must be re-defined in such a way as to  
3 protect the intellectual property owner. Copy  
4 protection and DRM technologies can, in fact,  
5 support the fair use concept and can allow time  
6 shifting, meaning using the purchased product or  
7 program at a later date and can also allow space  
8 shifting, using the purchased product or program in  
9 one or more playback device.

10           Many consumer rights groups have warned  
11 that copyright protection and DRM technologies will  
12 impose an unfair cost burden on all consumers  
13 because hardware and content prices will carry an  
14 intellectual property protection surcharge.  
15 Fortunately, most DRM and copy protection  
16 technologies can be implemented at a cost of  
17 pennies for each software unit, meaning CD, DVD, or  
18 pay-per-view program, and nickels and dimes for  
19 each hardware device. The actual cost of these  
20 technologies, including all royalties and  
21 implementation costs, is on the order of a small  
22 fraction of one percent of the retail price. This

1 means that the DRM and copy protection costs are  
2 well under ten cents per disk or program and in the  
3 range of 25 to 50 cents per hardware device. This  
4 is well under the one to two percent hidden tax  
5 that we as consumers have historically paid for  
6 physical goods due to fact that retailers gross  
7 their prices up in order recoup the shoplifting  
8 losses.

9                   Effective copy protection and DRM  
10 technologies actually expand new business  
11 opportunities. Many articles written about  
12 copyright reform legislation point out that the  
13 Hollywood studios were able to grow a substantial  
14 video business even though studios themselves  
15 predicted the obliteration of the movie industry  
16 once VCR-installed base became significant. Of  
17 course, we know all know that VCR actually  
18 simulated the growth of a new \$16 billion  
19 prerecorded media business. One fact that is often  
20 overlooked in this growth story is that the studios  
21 had access early on to a fundamental rights  
22 management technology, and that was electronic copy

1 protection on video cassettes, which meant that  
2 they were not at risk to wholesale unauthorized  
3 copying.

4               With the introduction of DVDs and new  
5 encryption technology and a new version of  
6 Macrovision's copy protection technology, all  
7 helped to provide the copy protection security that  
8 was required by the studios before they would  
9 release their valuable movies on the new optical  
10 disk format. Unfortunately, the same cannot be  
11 said for the music industry which has been without  
12 effective copy protection since the advent of the  
13 CD and which in the last two years has seen a  
14 decline in revenues due in large part to  
15 unauthorized CD copying and internet file-sharing.

16               Macrovision and other vendors are hard  
17 at work developing effective copy protection rights  
18 management and authentication solutions for music  
19 CDs that will allow the artists, music labels, and  
20 retailers to receive proper compensation for music  
21 albums. The music industry recognizes that  
22 consumers have historically made copies and



1 copulations of CD albums. A copy-protected  
2 DRM-managed CD can allow this, and it can also add  
3 to the consumer's musical experience. A new  
4 category of multi-session copy-protected  
5 DRM-managed CDs will provide consumers with new  
6 features via computers and the internet, enhance  
7 packaging and additional entertainment information  
8 and added value that had not previously been made  
9 available on non-copy-protected, non-DRM-enabled  
10 CDs.

11               In the video industry, we are working to  
12 establish an effective digital video copyright  
13 protection echo system which includes bilateral  
14 solutions comprised of matching hardware and  
15 content-based watermark technologies. The video  
16 watermarking solution has been proposed by the DVD  
17 CCA industry trade group. Macrovision, Digimark,  
18 Hitachi, NEC, Phillips, Pioneer and Sony have  
19 formed the video watermarking companies to offer a  
20 best of breed video watermarking solution for  
21 digital video applications. This watermarking  
22 technology protects video content on DVDs, video

1 cassettes, cable or satellite transmission, and the  
2 internal from unauthorized copying to recordable  
3 DVDs, digital video recorders, personal video  
4 recording, and multimedia personal computers. The  
5 digital watermarking system complements  
6 Macrovision's analog copy protection technology and  
7 will serve to plug the so-called analog hole.

8           In the software industry, Macrovision  
9 has been at the forefront of providing copy  
10 protection solutions for both consumer and  
11 enterprise software. We are the world's leading  
12 provider of PC games copy protection systems, and  
13 our Safedisk technology is routinely used on 70 to  
14 80 percent of all PC game titles. Companies like  
15 Microsoft, Electronic Arts, Take II Interactive,  
16 and Hasbro all use our Safedisk technology to  
17 prevent consumers from copying their P C games.

18           Other well-known software companies like  
19 Intuit, Apple, Autodesk, and Mass-Soft use our  
20 Safecast DRM solution to help them securely  
21 distribute their application software and ensure  
22 that consumers are in compliance with their

1 licensed terms of use. Another 2,500 software  
2 companies, including companies like Rational  
3 Software, Hewlett Packard, CISCO, and Cybase have  
4 used our Flex LM electronic license management  
5 software to help them in a corporate environment  
6 ensure that the end user corporation is in  
7 compliance with the terms of their licenses and the  
8 actual number of users matches the number covered  
9 in the contract.

10           The issues that we're discussing today  
11 are quickly reaching a crisis point. Simply put,  
12 the video music and software industries requires  
13 secure and versatile intellectual property  
14 protection safeguards in order to sustain their  
15 viable business models. At Macrovision, we believe  
16 that unless there is implementation of broadly  
17 adopted technology-based copy protection and DRM  
18 solutions, content holders will be reluctant to  
19 release premium digital content over the internet,  
20 which is essential for stimulating broadband and  
21 the consumer electronic sales. We believe that the  
22 private sector is able to take the lead role that

1 only when combined with supportive government  
2 legislation and follow-through in essential  
3 copyright areas as well as compliance and  
4 enforcement.

5           This paper has attempted to describe how  
6 technology for content protection and DRM can  
7 provide for and support consumer friendly robust  
8 secure and cost effective solutions that can enable  
9 content owners to navigate the digital highway with  
10 confidence and optimize the new opportunities  
11 offered business the broadband economy. In  
12 closing, I would like to emphasize three points for  
13 the PTO to consider: Copyright protection and DRM  
14 technologies are essential tools for U.S.  
15 intellectual property and copyright industries  
16 which themselves are among the largest and most  
17 innovative in the world. They must be nurtured and  
18 protected by copyright laws, and that includes  
19 outlawing any circumvention devices, techniques, or  
20 internet hacks that might be promoted in the name  
21 of fair use. The Digital Millennium Copyright Act  
22 should be strengthened this regard, not weakened.

1                   Two, copy protection and DRM  
2 technologies are proven, cost effective, and  
3 unburdensome to the consumer. The free-market  
4 economy is doing a good job at sorting out which  
5 competitor's products will win in the marketplace;  
6 however, in certain situations, as in video  
7 watermarking where it would be costly to force the  
8 hardware manufacturers to implement multiple  
9 solutions, industry standards make sense, and in  
10 these situations, the government needs to recognize  
11 that consortiums of companies should be allowed to  
12 come together to offer a single solution under  
13 unfair and non-discriminatory terms.

14                   And lastly, if industry groups cannot  
15 resolve their differences in a timely manner, the  
16 government should be ready, willing, and able to  
17 establish standards and, if necessary, select  
18 certain technology solutions in order to promote  
19 the adoption and deployment of copy protection and  
20 DRM technologies in order to spur the distribution  
21 of digital content in the future.

22                   I'll be glad to answer any questions

1 either now or as time permits later, and again, I  
2 appreciate the opportunity to be able to address  
3 this important cause.

4 MR. KATOPIS: Thank you very much,  
5 William. That was a great presentation.

6 And before we turn to our next presenter  
7 today, I just wanted to let everyone know a little  
8 bit more about the format. We're going to hear  
9 from Steven Potash from OverDrive and then Michael  
10 Miron from ContentGuard, and then we're going to  
11 have a break, and then we're going to hear from  
12 three more panelists, who I guess are trapped in  
13 rain, but they will be here. So you have a sense  
14 of where we're going and hopefully at the end,  
15 there will be time for some questions. So I'm  
16 asking you all to stick around, and if you need to  
17 make a phone call or get some coffee, please wait  
18 until the break so you don't miss what's about to  
19 be said.

20 So with that, I'm going to turn it over  
21 to Steven for his presentation.

22 IV. STEVEN POTASH

1 MR. POTASH: Thank you.

2 Good morning. My name is Steven Potash,  
3 and I'm CEO of OverDrive, Inc., and first I want to  
4 thank Director Rogan, Deputy Director Dudas, Chris,  
5 and of course Mike Shapiro and Ms. Steadman for  
6 arranging for our chance to present this morning.

7 I am here to discuss available  
8 technology to enable educators, libraries, and  
9 those interested in taking advantage of TEACH to  
10 use technology systems today to protect their  
11 content. By way of introduction--one second and  
12 we'll advance our slide show.

13 Just briefly, OverDrive is a Cleveland,  
14 Ohio company that for over a dozen years has been  
15 providing content owners a variety of ways to  
16 commercialize and securely distribute their content  
17 specifically focusing on copyrighted works. Over  
18 the last few years, we've developed a digital  
19 rights clearinghouse that is servicing a great deal  
20 of publishers and those in the educational space  
21 called Content Reserve. We are today holding over  
22 40,000 copyrighted publications that are in the

1 E-Commerce chain, being distributed to about a  
2 hundred retail locations and for other licensed  
3 uses. And in this space, we have had the pleasure  
4 of dealing with a variety of the educational and  
5 academic communities members who would be very  
6 interested in taking advantage of the TEACH Act  
7 capabilities.

8           The digital content marketplace over the  
9 last two or three years has proliferated due to the  
10 popularity of a variety of portable electronic  
11 devices, notebook computers, now tablet PCs, are  
12 enabling publishers and consumers and students a  
13 variety of ways to access their information, and  
14 the commercial channels have taken advantage of  
15 that, including retailers and traditional book  
16 sellers and textbook seller, and we at OverDrive  
17 have been involved with their go-to-market  
18 strategies and using digital content in a protected  
19 sense.

20           I'm also here speaking on behalf of the  
21 Open E-Book forum, which is a non-profit standards  
22 and trade association comprised of over 60



1 publishing, technology, educational, and government  
2 members. Actually, under the Department of  
3 Commerce and NST, we were founded in 1999 by the  
4 leadership of Dr. Victor McCreary, and within our  
5 organization, we have a very active rights and  
6 rules working group which is developing  
7 interoperability standards for digital rights  
8 management to further promote the interests of all  
9 parties in this space.

10           As indicated, the Open E-Book Forum is  
11 made up of a number of educational, library,  
12 government, publishing, and technology membership,  
13 all with interest in how technology can serve and  
14 further the purposes of the TEACH Act.

15           Now, as I mentioned earlier, we believe  
16 that it was recently, during 2000, that we saw a  
17 proliferation of DRM content enter the marketplace  
18 as a result of popular publishers of leading best  
19 selling trade titles, on-line retailers such as  
20 Barnes & Noble.Com starting to offer E-books,  
21 secured Acrobat PDF files, files for Palm digital  
22 media and Microsoft reader format that became the

1 basis of gross ecosystem of copy protected  
2 copyrighted content, and this happened because  
3 digital rights management systems, from a variety  
4 of technology vendors, had the tool sets to limit  
5 the access or the retention periods for their  
6 copyrighted material as well as prohibit  
7 unauthorized dissemination or transmission.

8           These solutions, as the marketplace has  
9 evolved over the last two and a half years, have  
10 been widely adopted in that we have community of  
11 over 500 commercial content publishers, many of  
12 them the leading academic and textbook publishers,  
13 utilizing these DRM solutions to reach millions of  
14 college students and similar experiences available  
15 abroad.

16           When we look at what is necessary for an  
17 institution to take advantage of the technology  
18 requirements of the TEACH Act, we see that the  
19 digital rights management infrastructure has five  
20 components. First, it requires that player or the  
21 reader that is going to be used by the student to  
22 access the content is something that is what we

1 call trusted and is an environment that can protect  
2 the interests other rights holder. Second, a  
3 service needs to enable, whether it's the educator  
4 or the library, to identify what are the rights and  
5 permissions associated with that piece of media  
6 content. Third, technology needs to package the  
7 content and the media representing those rights.  
8 The fourth element is an authentication service  
9 that helps identify that the person seeking access  
10 to the content is authorized and what level of use  
11 or permission is associated with that person or  
12 group. And then, finally, a service bureau that  
13 acts as a right clearinghouse needs to be available  
14 to intermediate all of this transaction activity  
15 and then provide back to the copyright holder  
16 information that his rights have been respected and  
17 retention periods are being honored.

18           A few of the widely available and free  
19 public software clients that are in the marketplace  
20 enabling the transmission of secured digital  
21 immediate media for TEACH Act include the E-book  
22 readers from Microsoft, of course Adobe Acrobat,

1 which is a very popular format for PDF. Microsoft  
2 has also one of the leading media players for audio  
3 and video content called Windows Media, recently  
4 released their new Series 9. And also, from Palm,  
5 we have Palm Digital Media Tools that are in wide  
6 use in educational markets to package and deliver  
7 text and images.

8           Each one of these technology platform  
9 companies, and there are others, have created  
10 freely available trusted player and clients and  
11 have associated technology, allowing the packaging  
12 of media for a variety of access, whether it's  
13 through dedicated desktop or mobile or wireless or  
14 PDA use. The evolution of the electronic  
15 publishing world has shown us that DRM can enable a  
16 very flexible array of models for the institution  
17 or library to limit or moderate access to the  
18 premium content. In the commercial marketplace,  
19 the most prevalent is retail sale of digital  
20 content. A consumer visits the website and enters  
21 his credit card, upon authorization, is provided  
22 access to copy protected content; but we're also

1 seeing today tremendous success with enterprise and  
2 institutional licensing, such as all members of a  
3 lab or a research group can subscribe to a  
4 particular set of protected media.

5           The library model is also evolving where  
6 we are now servicing public, academic, and  
7 corporate libraries who are using digital rights  
8 management services to enable select groups of  
9 students or patrons for particular periods of time  
10 access to copyrighted works, and, of course, these  
11 free players enable a wide range of text, images,  
12 audio, and video content.

13           The ability to enable the educator to  
14 package these digital assets is facilitated by the  
15 proliferation of a variety of web services. Most  
16 of are you are aware of a category of technology  
17 business called ASP or Application Service  
18 Provider, meaning where the institution seeking to  
19 use all these tools does not necessarily have to  
20 buy the hardware, the servers, and all of the  
21 software for location within their own firewall,  
22 but they can through a subscription or through a

1 select vendor subscribe for services that allow  
2 them to upload files and set permissions, such as  
3 restricting copying or distribution of documents.

4                 Similar web services enable an  
5 institution or educator to upload a video clip, an  
6 audio file in some popular digital file format such  
7 as Windows Media Player, and then through web forms  
8 associated with that media who is entitled to view  
9 it, for what period of time, and whether or not  
10 they have permissions to copy it to a CD or further  
11 pass it along to an associate. Those switches are  
12 all readily available for an educator to quickly  
13 package and limit or respect the TEACH Act  
14 provisions for digital works.

15                 A few market examples of how these  
16 technologies are working in education include  
17 E-File.Com which services about a thousand  
18 university campuses in the United States where  
19 every day and night students can access copyright  
20 protected educational material and curriculum.  
21 Whether it's downloading a whole textbook or a  
22 select chapter, the digital right management

1 services and infrastructure enable that secure  
2 distribution. We're also seeing that on specific  
3 campuses supplemental materials such as for the  
4 Kelly School of Business enable MBA students to  
5 download protected versions of case studies as are  
6 made available on a weekly basis by their  
7 professors. Academic and scientific researchers  
8 are now accessing very valuable and expensive  
9 medical collections. We even see digital rights  
10 management in early education, enabling reading  
11 centers to open up in elementary schools.

12           The same digital rights management  
13 system that has been opening up retail commerce for  
14 premium content is now very mature and robust for  
15 servicing the educational needs as contemplated by  
16 the TEACH Act. One of the core components is a  
17 diligent clearinghouse, such as Content Reserve,  
18 where we today are already managing 500 suppliers,  
19 setting permissions and monitoring usage by over a  
20 hundred institutions such as libraries as well as  
21 retail outlets.

22           We believe that the experience in the

1 digital publisher world, taking premium content and  
2 images and audio and video is very suitable for  
3 deployment for the educator seeking to promote  
4 distance learning with reach media and still  
5 respect the ownership rights of the media supplies.  
6 By using outsource solutions that have proven  
7 technologies and clearinghouse capabilities, we are  
8 now seeing how even public libraries can lend to  
9 their patrons and authenticate not only digital  
10 reading material, but videos, audio, and any other  
11 copyrighted material that once was only accessible  
12 by physically walking in the center and having  
13 access to the goods. These digital files can now  
14 not only be delivered through the internet to users  
15 worldwide, but the library can set circulation  
16 periods, auto-expiration of the file types, and  
17 exactly the kind of technological systems that the  
18 TEACH Act has mandates.

19               So in conclusion, we believe that the  
20 educational community and the library community  
21 will greatly benefit from the commercial  
22 marketplace experience in the popular formats



1 available for securing a variety of text images and  
2 audio and video content. These will enable the  
3 educators to access outsource that already have a  
4 further range of digital rights management  
5 technology and allow them to integrate the variety  
6 of commercial package media or digitized material  
7 from analog sources, as well as manage how that  
8 media is accessible and the circulation and  
9 retention periods, whether through their own  
10 university curriculum website or directly to a  
11 distance student.

12           The infrastructure is here today. It's  
13 available for the university and academic markets  
14 to take advantage, basically package your content,  
15 create the access and the rules, and publisher it  
16 using protect services and protected readers and  
17 players. So, in summary, we would in advising  
18 Congress indicate that the technology to enable the  
19 TEACH Act mandates are available today. Very  
20 affordable and widely deployed acceptance of  
21 popular reading and players software programs  
22 enable trusted delivery of the media content in the

1 context of the TEACH Act. There are competent  
2 clearinghouse and outsource services that can  
3 enable any educational institution to start to  
4 select and integrate such copyrighted material, and  
5 we expect that this will be a catalyst for  
6 improving the distance education climate as digital  
7 rights management services enable this rich  
8 educational material to be delivered to students  
9 under the Act.

10                   Thank you. I'll also just mention that  
11 during the break, I do have copies of our  
12 presentation available for those attending, and we  
13 will provide the office a link for our presentation  
14 on line.

15                   MR. KATOPIS: Well, thank you, and with  
16 that, we're going the turn to Michael. Michael  
17 Miron is Chief Executive Officer for ContentGuard.

18                   V. MICHAEL MIRON

19                   MR. MIRON: Thank you, Chris.

20                   My name is Michael Miron. I run a  
21 company called ContentGuard. For those of you  
22 unfamiliar with ContentGuard, we are focused on

1 developing digital rights management standards,  
2 licensing DRM technologies, and providing tools  
3 that assist in the implementation of those  
4 standards. I am pleased to offer comment on  
5 emerging technologies and standards that can be  
6 employed to conform to the requirements as outlined  
7 in the TEACH Act.

8           To take advantage to of the expanded  
9 exemptions in the TEACH Act, educational  
10 institutions must establish rights management  
11 policies and procedures and implement technologies  
12 that support them. This will require both  
13 organizational and technological changes. Some  
14 changes are specified by the TEACH Act, but others  
15 will come about because intellectual property  
16 management goes hand in hand with the more  
17 centralized and more sophisticated approaches to  
18 content management and content delivery. This has  
19 significant implementations not only for  
20 educational institutions, but also for the  
21 developers of authoring tools, course management  
22 systems, and content management systems.

1                   ContentGuard's written submission to the  
2 Patent Office explains how existing technologies  
3 and emerging digital rights standards can be  
4 applied to meet the requirements of the TEACH Act.  
5 Rights must be expressed and then re-expressed  
6 multiple times as educational content is created,  
7 acquired, stored, distributed, and eventually used  
8 by instructors and students. This involves diverse  
9 sets of technologies and content formats.

10                   The need for interoperability demands a  
11 standard approach to expressing digital rights.  
12 Our submission describes how this can be achieved  
13 using the rights expression language being  
14 developed as an international standard by the movie  
15 picture experts group known M-PEG.

16                   This morning, I'd like to highlight  
17 three points from our submission: First, that the  
18 DRM technologies can meet the requirements of the  
19 TEACH Act; secondly, that standards are essential  
20 to deal with need for interoperability that's  
21 coming, but not quite here; and the TEACH act  
22 really can be thought of as a specific requirement

1 of what is really a widespread need across all  
2 industries to manage digital rights more actively.

3           Some TEACH Act requirements can be  
4 supported with changes to administrative policies and  
5 practices, functionality that's already built into  
6 course management systems and academic  
7 administration systems, as well as security in the  
8 information technology environment, which generally  
9 comes under the heading of access control.  
10 However, the advent of widespread distributed  
11 computing, broadband networks, and distributed  
12 multimedia production requires some new techniques,  
13 specifically digital right management.

14           DRM is the process of defining,  
15 tracking, and enforcing permissions and conditions  
16 through electronic means. In the last few years,  
17 DRM has been popularity associated with copy  
18 protection for digital media and entertainment  
19 files in the combat of piracy. This is a much too  
20 narrow a view. DRM expands the uses and market for  
21 content, provides digital proof of purchase in the  
22 form of electronic license, and is not at all

1 limited to content for sale. It can apply equally  
2 as well to meeting privacy and confidential  
3 requirements in areas such as medical records,  
4 financial data, personnel files, electronic  
5 submissions of patent filings, legal documents, and  
6 a host of other applications. DRM is also well  
7 suited to meet the requirements of the TEACH Act.

8           Digital rights refer to what is  
9 permitted to believe done with digital files. The  
10 words "rights" and "permissions" are used  
11 interchangeably in the DRM context; however,  
12 "permission" is really the key word in the  
13 definition of rights. Access to digital content is  
14 not an inalienable right. It must be granted.  
15 Digital rights usually are accompanied by  
16 conditions under which they apply. For example,  
17 you may have a permission to install and use a  
18 piece of software, the right, provided you have  
19 paid a fee for it, the condition; or, according to  
20 the TEACH Act, you may have permission to transmit  
21 a MP-3 file, the right, provided that you are using  
22 it as part of a class offered by a non-profit

1 educational institution that has instituted  
2 appropriate policies and taken appropriate  
3 precautions to prevent unauthorized use of the  
4 file, the conditions.

5           Permissions and conditions can arise  
6 directly from copyright and other laws, as in the  
7 case of the TEACH act, can be determined by  
8 copyright holders, as in the case of licensing  
9 agreements, or can come about as part of  
10 institutional policies and procedures, as in the  
11 case of an institution managing confidential  
12 documentation. One the key technologies in digital  
13 rights management is that of the rights expression  
14 language. Rights expression languages describe the  
15 allowable uses of digital content in a language  
16 that can be interpreted by a machine or an  
17 application. This capability is crucial for  
18 automated management and enforcement of copyright  
19 and other intellectual property rights.

20           All DRM systems have ways to express and  
21 interpret digital rights, but little of this is  
22 standardized yet, relying instead on proprietary

1 rights expressions that are specific to platforms,  
2 formats, media types, or vendors. Relying on  
3 proprietary implementation of existing products is  
4 a piecemeal approach to DRM. Systems could be  
5 implemented to comply with TEACH only and for  
6 content from known sources; however, other uses  
7 would require separate systems. Proprietary  
8 solutions would have to be reworked when technology  
9 changes or when new media types or formats are  
10 introduced, and proprietary solutions are difficult  
11 to scale and maintain, and over the long run, it's  
12 untenable.

13               Content comes from a variety of sources,  
14 in many different media types and formats, and is  
15 processed by many different types of systems. Any  
16 viable means of managing digital rights must work  
17 for all of these, which means that it must be based  
18 on universally accepted standards. The European  
19 Commission found that the lack of DRM standards was  
20 identified as the main issue hindering the  
21 acceptability and uptake of DRM systems,  
22 notwithstanding some early successes.



1           It is not surprising, therefore, to find  
2 a number of digital rights management  
3 standardization efforts around globe, and  
4 ContentGuard is involved in most of them. The most  
5 prominent such effort is an activity that taking  
6 place within the movie picture experts group, which  
7 is part of ISO, the International Organization for  
8 Standards, and is more commonly referred to as  
9 M-PEG. The M-PEG standards are being developed  
10 under the auspices of ISO which is supported by  
11 over 140 countries and whose standards are often  
12 taken as the basis for national and international  
13 laws and regulations. Furthermore, the M-PEG  
14 efforts is supported by many companies involved in  
15 the production and delivery of multimedia content,  
16 exactly what the TEACH Act covers. This is a  
17 strong indicator that DRM based on standardized  
18 rights expressions will soon appear in many  
19 products and services. The M-PEG rights expression  
20 language will be formally issued as an  
21 international standard later this year.

22           ContentGuard has been very active in the

1 work at M-PEG, and indeed the M-PEG REL is based  
2 upon technology that we developed and proposed to  
3 it in 2001. Our submission to the Patent Office  
4 goes into some depth on how the M-PEG REL can meet  
5 the requirements of typical use cases that would  
6 fall under the TEACH Act.

7 I should mention other standards efforts  
8 are likely to also leverage the work of M-PEG REL  
9 to further interoperability, including the Open  
10 E-Book Forum, of which Steve spoke, as well as the  
11 emerging world of web services. The ability to  
12 interpret right expressions is rare in most  
13 software applications today, notwithstanding the  
14 early appearance of some DRM systems, but there are  
15 reasons to believe it will become increasingly  
16 commonplace. The process towards international  
17 standards make it likely that products will be able  
18 to interpret and enforce usage licenses written in  
19 rights expression languages in the relatively near  
20 future. It is therefore appropriate to start  
21 asking product development staffs and product  
22 vendors to incorporate these capabilities to

1 create, interpret, and enforce rights expressions  
2 into systems that support on-line learning. Some  
3 of this is already beginning to happen, although  
4 not yet visible to the marketplace.

5           Since expressions can be created and  
6 understood independent of any technology, it is  
7 possible to become familiar with rights expression  
8 languages now, and this is a good preparation for  
9 the evolutionary changes that will be engendered by  
10 the TEACH Act and related developments. Of course  
11 the TEACH Act and other legislation create  
12 incentives and requirements for incorporating DRM  
13 into products. Software vendors will not be able  
14 to make sales into markets controlled by this type  
15 of legislation unless they provide the required DRM  
16 features.

17           Some final thoughts: Although the TEACH  
18 Act applies only to accredited non-profit  
19 educational institutions, it is representative of  
20 the evolving opportunities and new challenges that  
21 are faced by organizations when there's a change of  
22 the law. Other industries should see it as the

1 type of requirement that may face the next time  
2 copyright law changes in a way that affects them  
3 directly.

4               Finally, a word about fair use. We  
5 believe the debate over fair use and DRM is  
6 misplaced. This is not an either-or problem.  
7 Broad interoperable standards can enable systems to  
8 offer uses that do provide for fair use exemptions;  
9 however, they are situation and system specific and  
10 cannot be mandated in technology standards.

11              I am optimistic about the future of  
12 digital content distribution enabled by  
13 standards-based digital right management. Once  
14 products begin to deploy and market participants  
15 begin to experiment with them, enabling them to  
16 break out of the limitations of the current modes  
17 of content distribution. And I will be pleased to  
18 respond now to questions, or I guess during the  
19 break.

20              MR. KATOPIS: Well, thank you. I think  
21 what we're going to do now, we're going to take  
22 about a 20-minute break for people to check in with

1 their offices, get a beverage downstairs, whatever  
2 you have to do, and then we're going to return and  
3 we're going to hear from three more panelists, and  
4 then after their presentations, hopefully we'll  
5 have some time for questions and to continue this.

6 So I'll see you back here in 20 minutes.

7 [Recess.]

8 MR. KATOPIS: Welcome back. I'm Chris  
9 Katopis, and we have some more panelists with us  
10 this morning. Before we start with their  
11 presentations, I just wanted to take a moment to  
12 introduce Michael Shapiro, sitting next to me, who  
13 is one of our top copyright experts here at the  
14 Patent and Trademark Office and give him our thanks  
15 for really putting a lot of hard work and effort  
16 into organizing not only this presentation, but  
17 Michael is working on the report which ultimately  
18 will come out of these talks and the submissions we  
19 receive from the public, which is going to come out  
20 by--I think May 2nd is the statutory deadline.

21 And I'd be remiss in not thanking  
22 Volicia Steadman, who is sitting up front, for all

1 of her hard work in putting this together. She has  
2 done a wonder job, and we thank her for everything  
3 she's done today.

4 With that said, we're now going to turn  
5 to Troy Dow, who is Vice President and Counsel for  
6 Technology and New Media at the Motion Picture  
7 Association of America. Troy will talk for 15  
8 minutes, and then we will turn to Bruce Funkhouser,  
9 who is Vice President of International and Business  
10 Operations for the Copyright Clearance Center, and  
11 then hopefully Mark Bohannon from SIIA will be  
12 joining us. And if there is time, we may have some  
13 questions, but let's see how this all proceeds.

14 So, Troy, why don't you begin?

15 VI. TROY DOW

16 MR. DOW: Thank you, Chris. Thank you  
17 for the opportunity to appear here today on behalf  
18 of the Motion Picture Association of America to  
19 provide further input in your review of  
20 technological protection systems for digitized  
21 copyrighted works.

22 As you know, MPA and its member

1 companies place tremendous emphasis on  
2 technological protection systems, both as a means  
3 of enabling new choices and new products for  
4 consumers and as a means of protecting capital  
5 investment and high-quality and high-valued digital  
6 entertainment products. Indeed, MPA and its member  
7 companies have all devoted and continue to devote  
8 substantial time, effort, and resources to the  
9 development of a meaningful architecture of the  
10 digital content protection, including the direct  
11 engagement with technology providers to  
12 participation in voluntary multi-industry  
13 negotiations and to participation in open technical  
14 standard setting processes.

15           As a result, there is today a robust and  
16 growing market for content protection systems, and  
17 a number of technologies have been developed and  
18 implemented or are available for implementation,  
19 noting of course that patent and licensing issues  
20 may remain as barriers to implementation in some  
21 cases. While progress has been made in this area,  
22 much more remains to be done, particularly given

1 the challenges posed by the growth of virtually  
2 unchecked and wholly unauthorized viral  
3 distribution of copyrighted works via digital  
4 networks.

5           The Patent and Trademark office has the  
6 opportunity to play a valuable facilitating role in  
7 this process by providing information to Congress  
8 regarding technological protection systems that  
9 have been implemented, are available for  
10 implementation, or are proposed to be developed to  
11 protect digitized copyrighted works and to prevent  
12 infringement. As we have said many times before,  
13 there is no one solution to the challenge of  
14 digital piracy. There are, however, certain goals  
15 that we believe must be accomplished as part of any  
16 meaningful attempt to construct an overall  
17 framework for the protection of digitized  
18 copyrighted works.

19           There is variety of work that is ongoing  
20 to develop technologies that fit into such a  
21 framework. Significant progress has been made on  
22 some fronts and less on others, yet we are not



1 aware of a single report to the Congress that  
2 provides a comprehensive overview of the content  
3 protection landscaping, including a description of  
4 technologies that have been developed and  
5 implemented, that are available for implementation,  
6 or are proposed to be developed with a description  
7 of how those individual technologies or kinds of  
8 technologies might fit together in an overall  
9 framework of meaningful protection of digitized  
10 copyrighted works. For that reason, we believe the  
11 inquiry you are now undertaking is an important  
12 one, and MPA will be pleased to provide you with  
13 whatever assistance you consider to be of use in  
14 your efforts.

15               Putting first things first, it's  
16 important to define appropriately the scope of the  
17 present inquiry as mandated by the TEACH Act. We  
18 agree with the higher education associations and  
19 libraries associations with which the MPA engaged  
20 extensively in the deliberations leading up to  
21 enactment of the TEACH Act, but the current inquiry  
22 is not aimed at or even directly related to the

1 technological protection measurement provisions of  
2 the TEACH Act. As the statute quite clearly  
3 states, the purpose of the report is to solely to  
4 provide information to Congress and is not to be  
5 construed to affect in any way the direct link or  
6 by implication of any provision of the Copyright  
7 Act or TEACH Act in particular.

8           As the higher education associations and  
9 library associations pointed out in their written  
10 comments, the subject matter of the PTO report is  
11 not limited to technological protection measures  
12 that might be appropriate for use by non-profit  
13 educational institutions availing themselves of the  
14 newly expanded Section 110.2 exemption for distance  
15 education, even though some comments may have been  
16 so limited and even though one explicitly urged the  
17 PTO to focus solely on such technologies.

18           The statutory language and the  
19 legislative history make it clear that the purpose  
20 of the report is to provide information to Congress  
21 about technologies that now exist or are likely to  
22 be developed to protect digital content generally.

1 We disagree, however, with the higher education  
2 associations and library associations that it is  
3 properly within the scope of the inquiry to, quote,  
4 clarify some of the legal issues raised by the use  
5 of the TBMs, end quote, and to cast judgment on,  
6 quote, the extent to which those measures interfere  
7 with fair use and other lawful uses.

8               As you know, Congress is keenly aware  
9 and attuned to these issues and has through the  
10 enactment of the Digital Millennium Copyright Act  
11 dedicated a statutorily mandated and recurring  
12 examination by the Copyright Office to discourage  
13 the question of the impact of technological  
14 protection measures on the ability of users to make  
15 non-infringing uses of copyrighted works. That  
16 rulemaking process is ongoing as we speak.

17               There is nothing in the TEACH Act or the  
18 legislative history that suggests that Congress  
19 intended this report to also deal with those very  
20 same issues. In fact, given the ongoing rule  
21 making proceeding in the Copyright Office, to  
22 decide such questions in this report would be

1 conflict with the clear intent of the TEACH Act,  
2 which is that report in no way be construed to  
3 affect in any way either directly or by implication  
4 any provision of Title 17 of the United States  
5 Code.

6           Turning now to the substantive issues at  
7 hand, MPA, as I referenced earlier, has ascribed  
8 three primary goals whose attainment we believe is  
9 necessary in order to prevent digital piracy and to  
10 facilitate the viability of a legitimate  
11 marketplace for high-quality digital entertainment.  
12 These are as follows: Goal one, implementing a  
13 broadcast flag to prevent the unauthorized  
14 distribution and redistribution of in-the-clear  
15 digital over-the-air broadcast television,  
16 including its unauthorized re-distribution over the  
17 internet; goal two, plugging the analog hole that  
18 results from the protected digital content that can  
19 easily be on converted to analog form and then  
20 reconverted to unprotected digital form, making it  
21 subject to widespread unauthorized copying and  
22 redistribution; goal three, putting an end to the

1 avalanche of copyright theft on so-called  
2 file-sharing services on peer-to-peer networks.

3           Now the technological means of attaining  
4 each of these goals may and often will differ.  
5 Each of those goals is discussed separately in my  
6 previously submitted written comments, along with  
7 an overview of digital technological solutions.  
8 There's not time to undertake a detailed treatment  
9 of them here. What is important to understand is  
10 the attainment of each of those goals is needed in  
11 order to construct an overall frame work for  
12 content protection in the digital environment.

13           Any meaningful framework for content  
14 protection must include a reasonably secure  
15 architecture for the distribution of digital  
16 content and the means, both technical and legal, of  
17 limiting the proliferation of unauthorized content  
18 that does escape the framework of technological  
19 protection systems. Peer-to-peer piracy is such a  
20 difficult challenge and such a major threat to  
21 copyright owners because it combines the ease of  
22 reproduction and distribution brought about by

1 digital technology with the amplification effect  
2 created by the viral distribution of architecture  
3 in which every unauthorized copy is in turn made  
4 available to millions for unauthorized downloading,  
5 such that a single copy can literally populate an  
6 entire network.

7           Much work is being done to develop  
8 technological systems and architecture that is  
9 intended to create a secure environment for the  
10 distribution of digital content and to limit the  
11 sources of unauthorized content on peer-to-peer  
12 networks. The broadcast flag is one technology  
13 aimed at preventing unencrypted over-the-air  
14 digital broadcast television from becoming a source  
15 of pirated television programming on peer-to-peer  
16 networks. Similarly, plugging the analog hole  
17 through the use of watermark and other content  
18 control information-marking technology is another  
19 important effort aimed at ensuring that consumer  
20 devices with unprotected analog outputs do not  
21 continue as a long-term source of pirating content  
22 on peer-to-peer net works. There is even work

1 underway to develop technology to prevent camcorder  
2 copies of movies from being made in the theatre.  
3 All of these efforts are described in more detail  
4 in my written comments, and I will refer back to  
5 them.

6           In my written comment, I also describe a  
7 variety of other technologies that are available or  
8 under development, including encryption,  
9 authentication, conditional access, link  
10 protection, digital watermarking, CCI marking,  
11 digital rights management, and trusted computing  
12 platforms, all of which are intended to fit  
13 together in an overall framework that allows for  
14 the secure delivery of digital content to the home  
15 and for system protection against unauthorized  
16 access and redistribution once the content is  
17 delivered. Unfortunately, no matter how good  
18 technology is, it will always be susceptible to  
19 defeat; thus any meaningful framework of digital  
20 content protection must including a means of  
21 limiting the proliferation of those unauthorized  
22 copies that inevitably will escape the protected

1 framework.

2           In my written comments, I note that  
3 there are a variety of technologies that now enable  
4 tracking of infringement on peer-to-peer networks  
5 and as well as others that offer so called  
6 self-help mechanisms to limit peer-to-peer  
7 infringement. Still other technologies are in use  
8 by universities and corporations and others to  
9 control abuses of their networks by peer-to-peer  
10 users.

11           Finally, existing technologies like  
12 watermark content control information have a  
13 potential for use in new security architectures to  
14 provide recorder control, copy control, and  
15 playback control in the digital network  
16 environment. To some extent, such systems already  
17 exist. For example, CPRM licensed players are  
18 required to look for a watermark in a unencrypted  
19 disk and will refuse to play copy-never or  
20 copy-once content, recognizing that the unencrypted  
21 disk by definition must have been made without  
22 authorization. Similar systems might be developed



1 for implementation across devices in the network  
2 environment, although little progress has been made  
3 in this area. This is work that will require  
4 cooperation and agreement by a broad range of  
5 interests and work that we hope will move forward  
6 in some facility.

7           In closing, let me say again thank you  
8 for the opportunity to appear before you today.  
9 The job before you is no small task. It would be  
10 near impossible for me or probably any of today's  
11 witnesses to list for you every technology now  
12 existing or under development for use in protecting  
13 copyrighted work against infringement. I hope that  
14 my comments have at least been helpful in painting  
15 the picture of the overall content protection  
16 landscape and in giving some context as to how the  
17 technologies you are seeing fit into an overall  
18 framework of content protection.

19           As indicated earlier, MPA will be  
20 pleased to provide whatever additional information  
21 or assistance that may prove useful to you in  
22 completing this study. Thank you.

1                   MR. KATOPIS: Thank you very much, Troy,  
2 and now we'll here from Bruce Funkhouser from the  
3 Copyright Clearance Center.

4                   VII. BRUCE FUNKHOUSER

5                   MR. FUNKHOUSER: I'm Bruce Funkhouser  
6 from the Copyright Clearance Center. I think I  
7 have a somewhat unique perspective on this panel  
8 because I am neither a purely technological  
9 company, a developer of DRM, a content owner, nor a  
10 content user, who we certainly don't seem to be  
11 hearing from today. What we are, what the  
12 Copyright Clearance Center is is the reproduction  
13 rights organization for the United States. Our  
14 focus is to enable commerce and has been since  
15 1978, to enable commerce in accordance with the  
16 copyright law, which at its core asks us all to use  
17 the copyright law in the Constitution to promote  
18 the useful arts and sciences, not to protect in any  
19 one-sided manner either the purported rights of the  
20 users or the purported rights of the rights owner,  
21 but rather to facilitate commerce so that we get  
22 more arts and more sciences created.

1                   We have been doing this, as I said,  
2   since 1978 at the suggestion of Congress. When  
3   faced with the new Copyright Act in 1975, Congress  
4   looked around and saw that in the music arena and  
5   in other arenas, there were organizations that  
6   could, in fact, facilitate that kind of commerce,  
7   be it in performance rights or mechanical rights.  
8   There were agencies outside of the textual field.  
9   There wasn't anything in the text field, and so  
10  they suggested to the rights owners and the users,  
11  the primary users of text, that is the academic  
12  institutions and research organizations and other  
13  corporate businesses, that they coming together and  
14  put together something along those lines, and thus  
15  the Copyright Clearance Center was born, not,  
16  again, just one-sided, not representing solely the  
17  rights holders and the content owners, but actually  
18  sitting on our board still to this day are both  
19  users and rights holders.

20                   And I think that gives us kind of a  
21  unique perspective on both this situation that has  
22  arisen in conjunction with the TEACH Act and on

1 copyright and its enforcement in general. Our  
2 suggestion here is that what we are looking at in  
3 the TEACH Act, and perhaps we should remember that  
4 the TEACH Act is the Technology Education And  
5 Copyright Harmonization Act. It's not a technology  
6 act, it's not a copyright act. It's not an  
7 education act. It's an attempt to harmonize all of  
8 those together.

9           What we have heard certainly during the  
10 first half of this morning's presentations is that  
11 there are systems out there. Whether they're  
12 hardware based on software based, whether they're  
13 robust or just beginning, whether they're based on  
14 the content or on the use or on the source, there  
15 are a number of opportunities out there that  
16 provide DRM sufficient to meet the needs of the  
17 TEACH Act.

18           We too, the Copyright Clearance Center,  
19 in an effort to promote commerce and specifically  
20 E-Commerce around textual material have also  
21 developed--separate from our normal business, we've  
22 also developed a series of DRM systems that are

1 applied actually at the content publisher sources.  
2 So we have firsthand knowledge that there exists  
3 this kind of technology, but what we would like to  
4 suggest here is that despite the fact that the  
5 TEACH Act has technology as its first word, despite  
6 the fact that the PTO was asked to review the  
7 technology that is available out there and to make  
8 its report to Congress, that technology, ours or  
9 anyone else's, is, while extremely necessary to  
10 facilitating this commerce, is not sufficient. All  
11 parties in the intellectual property community have  
12 to benefit from an ongoing effort to use  
13 technology, but only as part of a larger system  
14 which includes easy access to licensing at  
15 reasonable prices that include broad copyright  
16 education efforts, that includes mechanisms for  
17 ongoing dialogue between rights holders and users,  
18 and the flexibility available only through direct  
19 human involvement, rather than reliance on pure  
20 technology as an answer in and of itself.

21 As I said, CCC has developed its own  
22 systems. We are here and have been supporting

1 education and specifically distance education  
2 through a series of efforts both within our role as  
3 a reproduction rights organization and also in our  
4 role as a developer of technology to facilitate  
5 kind of commerce. In 1995, before Amazon.Com and  
6 before eBay, CCC was using the web to license  
7 activity in both the academic and corporate  
8 environment. In 1997, we begin a program of  
9 distance education licensing called the Electronic  
10 Course Content Service, which allows rights holders  
11 on the one hand to offer their rights in a  
12 collective manner through an organization such as  
13 CCC and on the other hand allows users to come to  
14 one organization to find the material they need to  
15 include in their distance education course package  
16 without having to go to every single--track down  
17 every single rights holder, find that rights  
18 holder, bargain with that rights holder, and  
19 discover that the rights holder really would rather  
20 somebody like CCC handle that business and end up  
21 coming back to CCC in the end.

22 But even in 1995 and 1997 as we begin

1 these processes, we realized the technology, while  
2 incredibly important, especially in a digital  
3 environment, was again not the only answer, and so  
4 we have created not only the technological  
5 interfaces, but the human interfaces as well that  
6 allow this kind of commerce to take place.

7           What we suggest here is that in the  
8 overarching answer to the first question, that is  
9 what technological systems are available out there,  
10 as I said earlier, we suggest that there are  
11 systems. We've developed some. The other  
12 gentlemen at this table have all developed some.  
13 We think that there sufficient systems out there as  
14 required under the TEACH Act that are available at  
15 relatively low cost today and that the majority of  
16 academic institutions are likely to use these  
17 systems over time and as appropriate.

18           Copyright Clearance Center, as I said,  
19 offers its own technological protection system in  
20 the form of an enterprise software solution for the  
21 publishers that allow them to protect digitized  
22 copyrighted works and which is used today by a

1 number of major publishers. However, again, our  
2 expertise and experience has shown that a  
3 technology centric solution has severe limitations.  
4 Lest I raise the dreaded word "fair use" and get  
5 wholesale hauled out and tarred and feathered  
6 around here, the possibility that fair use can be  
7 prevented in a wholesale nondiscriminating manner  
8 by misapplied technology is out there, and any  
9 technological protection can always be breached,  
10 and once breached, it is no longer offering any  
11 protection.

12 Technology works to facilitate the  
13 copyright system and prevent infringement only when  
14 it's encompassed by a larger system of easy access  
15 to licensing at reasonable prices, a broad  
16 copyright education effort, mechanisms for the  
17 ongoing dialogue between rights holders and users,  
18 and the flexibilities I've suggested is available  
19 through direct human involvement.

20 Copyright Clearance Center, as I  
21 mentioned, is a private voluntary not-for-profit  
22 industry-led entity. And that's both industries,



1 both the right holders industry and the user  
2 industry. It is effective because it incorporates  
3 technology into a larger system, as I described  
4 above. It is effective because it has people who  
5 are experts in the fields of rights management.  
6 It's effective because it has a scale of operations  
7 and a network of bilateral relations with other  
8 foreign reproduction right organizations throughout  
9 world, which enable us to deliver unique efficiency  
10 and a unique set of works. It had a goal of making  
11 copyrighted works as broadly accessible as possible  
12 and it has to make its agreements unexclusive.

13 I think that this combined with the  
14 technologies that we have heard of, and again, as  
15 with most of the other panelists, if the Trade  
16 Office would like to see a demonstration of the  
17 technological answers that we have developed or I  
18 assume that any of the other panelists have  
19 developed, we're all more than willing to go into  
20 much more depth at a later time with the Patent and  
21 Trade Office around all of those.

22 So I think, in conclusion, kind of what

1 we are after here is asking that the report when  
2 it's delivered on May 2nd, while the technology  
3 office has been--Patent and Trade Office--excuse  
4 me--has been asked to deliver a technological  
5 assessment of what is out there, that included in  
6 that is not only the idea that the technologies are  
7 available, they are being developed, they do meet  
8 the requirements to have TEACH Act, but also that  
9 the Patent and Trade Office suggest to Congress  
10 that perhaps technology is not the final answer,  
11 that technology is a start. Technology is a  
12 critical part of what we all need to focus on, but  
13 only in the broader context as I've defined it.

14 Thank you.

15 MR. KATOPIS: Well, thank you, Bruce,  
16 for your presentation. Thank you, Troy, for your  
17 presentation.

18 Unfortunately, I don't think Mark  
19 Bohannon will be joining us. I don't see him here.  
20 I guess the rain has got the better of him.

21 But we have a little bit of time left,  
22 so what I would like to do, if the panelists don't

1 object, is turn this over to Michael Shapiro for  
2 some questions that really stem from the  
3 congressional mandate regarding this topic and just  
4 ask him to do that for a few minutes.

5 MR. SHAPIRO: Sure. Thanks, Chris.

6 As threshold matter, let me add many my  
7 thanks to John Dudas and Chris Katopis for their  
8 comments today. I think it's beginning of a  
9 beginning of an intense kind of educational  
10 process, the PTO in dialogue with technology  
11 companies and dialog with the users community, in  
12 dialogue with the content community to chart what  
13 is this rapidly changing universe.

14 In thinking about this report, I'm very  
15 conscious of the precision that Congress used in  
16 framing the questions that it put to PTO, and I  
17 just thought along those lines, at least on the  
18 product side of our report, the Congressmen were  
19 very specific to ask us to think about  
20 technological protection systems that have been  
21 implemented or are available for implementation or  
22 are proposed to be developed, and then they went on

1 and added two product attributes, or at least what  
2 I'm call attributes. They mentioned is your system  
3 upgradable and is your system self-sustaining.

4               So on the product side, at least, if  
5 there is specific information on these two elements  
6 or any other attribute with respect to the products  
7 that you see in the marketplace, PTO will be kind  
8 of very interested in developing a kind of  
9 attribute grid, as it were.

10              So the floor is open to the panelists at  
11 least on the product side to address those issues.

12              MR. KREPICK: Michael, I can tell you  
13 the DRM technologies that we're working with, by  
14 nature, they have to be upgradable because we know  
15 that we're facing, irrespective of how much  
16 protection we're given by the copyright laws and  
17 circumvention techniques and things like that, we  
18 know that we're facing some pretty fierce hackers  
19 out there throughout the world, and so we typically  
20 have three or four releases of software a year  
21 specifically designed to try and upgrade the  
22 solutions just from standpoint of preventing

1 hackers and trying to stay ahead of them.

2                   On the other hand, I think we also have  
3 the capability to upgrade the product from the  
4 feature standpoint, because as everybody knows,  
5 this whole digital rights management area is pretty  
6 new, and as our customers start working with the  
7 systems, they find out that they want more  
8 flexibility in their solutions. They want to do  
9 certain things with respect to their particular  
10 software or their particular content across their  
11 class of customers, and so we have ongoing programs  
12 to develop those from the standpoint of features  
13 as well as kind of hack resistance.

14                   MR. SHAPIRO: Thank you.

15                   MR. POTASH: Thank you. Michael, I  
16 might respond that Congress sought information  
17 relative to enabling educators to use these systems  
18 to comply with the provisions of the Act, and the  
19 broadly used free readers, such as Adobe Acrobat  
20 Reader, or for audio and video, Microsoft Windows  
21 Media Player, already support some of those  
22 specific product features that are enumerated, such

1 as enabling the educator to use a variety of  
2 systems to authenticate and identify that the  
3 student or those accessing them are in the eligible  
4 class.

5           They also support, and this is done by  
6 service bureaus like OverDrive where we can  
7 integrate best of breed technologies, can manage  
8 and limit the retention period. So both the  
9 student has access to the protected media during  
10 the course of maybe his classroom work and a  
11 limited period for exams, but then it shuts down,  
12 and then the institution may have a different  
13 retention period. So if that professor is going to  
14 reinstitute that curriculum to a new semester, they  
15 can manage those things.

16           Also, the widely adopted free readers  
17 and players have in their trusted infrastructure  
18 the ability to limit the re-transmission or  
19 unauthorized distribution of the file outside of  
20 those that are intended by the Act to the distance  
21 learners. So we would just say that by the fact  
22 that service bureaus are taking best of breed

1 technologies across multiple operating systems and  
2 multiple readers, it's continually renewing the  
3 choices for educators to utilize the Act, but still  
4 respect the needs of the content owners in using  
5 the technology to limit those redistributions.

6           And one further remark I would just  
7 make, as we were chatting during the break, is  
8 there is a significant upside by using these  
9 technologies as well to service some of communities  
10 that are disabled, and the digital transmission of  
11 content is going to be very enabling. These  
12 includes specifically the print disability markets.  
13 We know that by taking curriculum material and  
14 making it accessible in digital format, it allows  
15 under controlled circumstances text to be  
16 synthesized, stream readers so the blind and  
17 dyslexic and the literacy needs of those  
18 communities can take advantage of the distance  
19 learning opportunity with rich multimedias.

20           Thank you.

21           MR. SHAPIRO: Thank you.

22           MR. MIRON: I think it's just been

1 pointed out that all companies seek to upgrade  
2 software, more product releases to deal with market  
3 demand. That's what they're in business to do. I  
4 think those were just highlighted a few moments  
5 ago.

6 But let me make a few other points about  
7 upgradability. Each product supports specific  
8 rights or capabilities as they see demand for  
9 particular market domains. Existing systems deal  
10 with content from known sources. They don't deal  
11 very well with content from unknown sources, and in  
12 the case of TEACH Act, let's take the example of  
13 student-created work, which isn't necessarily going  
14 to originate from the central departments on  
15 university campuses that are likely to be the  
16 implementers of the systems of today. That will  
17 take more advanced capabilities. That will  
18 probably take and require the sort of standards  
19 that I described earlier in order to provide that  
20 sort of widespread capability, in essence  
21 on-the-fly conformance with TEACH Act, rather than  
22 specific programs that are fostered and sponsored



1 by universities.

2 MR. SHAPIRO: Thank you.

3 MR. FUNKHOUSER: Yeah. I think what  
4 we've all been trying to say is that the software  
5 that we've all developed is, by its nature in order  
6 to be successful in the market out there, going to  
7 have to be upgradable. These systems that we've  
8 all be working on in one way or the other are based  
9 on internet architectures or interior client  
10 service architectures that meet standards of the  
11 enterprise software industry regarding the  
12 reasonable time, money, and effort that it takes to  
13 upgrade them, and that I can say that our system,  
14 and I think I can safely say that every other  
15 system I've heard here, that they're all designed  
16 to be interoperable with the industry standards.  
17 They're designed to be easily upgradable;  
18 otherwise, I don't think they would be successful  
19 businesses.

20 And we do have Mark here.

21 MR. KATOPIS: That's a great segue.

22 Troy, did you want to add anything to

1 this dialog before we move on?

2 MR. DOWN: I've been waiting for Mark.

3 MR. KATOPIS: We all have, and we're  
4 very pleased to have Mark Bohannon, General Counsel  
5 and Executive Vice President for Government Affairs  
6 from SIIA, who is a stranger to none of you, I'm  
7 sure.

8 And, Mark, we'll turn to you for 15  
9 minutes for a presentation on this.

10 VIII. MARK BOHANNON

11 MR. BOHANNON: Chris, thank you very  
12 much for your patience. Unfortunately, our  
13 president was out of town and had another speaking  
14 engagement at nine, which I had to fill in for. So  
15 I appreciate your patience, and it's a pleasure to  
16 be here today.

17 As you know, we submitted comments on  
18 January 14th. I am going to give you an updated  
19 copy. Since that time, we want to make sure you  
20 have the most up to date product information from  
21 our list, and so there are some updated URLs that I  
22 think might be useful to the PTO and the Copyright

1 Office as well.

2           In putting together our submission, as  
3 many of you know, our submission reflects the fact  
4 that we are one of the principal trade associations  
5 of the software code and information content  
6 industry. There's about 600 companies that produce  
7 content software for a variety of markets,  
8 including entertainment, education, business, and  
9 consumers. In this context, related to technical  
10 protection measures, our members represent a wide  
11 range of both small and medium size and large  
12 companies as well as user interests. Our members  
13 create and develop valuable technical protection  
14 systems for use by others in a variety of markets.  
15 Our members use technical protection systems to  
16 protect their proprietary software content, and in  
17 fact many of our member purchase or license  
18 software and information products and other content  
19 and services that utilize technical protection  
20 systems.

21           Our goal in our submission is to give  
22 the Copyright Office and Patent and Trademark

1 Office a panoply of products and services that we  
2 believe are currently on the market. I'm sure that  
3 we left out some, but we hope that it serves as an  
4 indicator of what we believe is a very vibrant, a  
5 very dynamic, and a market that is, in fact,  
6 addressing many of needs of users and producers of  
7 content in ways that work.

8           If there is one sort of central message  
9 of our submission, it's that in light of the  
10 experience of our members in producing and focusing  
11 on a variety of markets, we find that on the whole  
12 that we are seeing the development of protection  
13 systems that reflect market demands at this point,  
14 and those demands have not and cannot be met, we  
15 believe, by either a one-size-fits-all business  
16 model solution, nor a one-size-fits-all technical  
17 solution. On the contrary, I think our survey of  
18 the market shows that technical protection systems  
19 have been successful when they are appropriate to  
20 the circumstances of the market situation, taking  
21 into account user needs, the value of the  
22 information or content to be protected, and the

1 soundness of the business model.

2           As I said earlier, we believe that based  
3 on our work with our members and our knowledge of  
4 the market, that it is clear that this is a dynamic  
5 evolving situation, and changes in both technology  
6 and business models are evolving rapidly. So any  
7 report that the Copyright Office and PTO decide to  
8 include in the report to Congress, I think it's  
9 very important to take that into account, that this  
10 is a snapshot of what is going on today. It's very  
11 different than it was three years ago, and we think  
12 the market will be very different than it is three  
13 years from now.

14           Our goal, our other goal, in producing  
15 our submission to the Patent and Trademark Office  
16 is, in fact, to give a flavor of the variety of  
17 players in the market. You've heard from some of  
18 them hear today. We encourage the offices to look  
19 at our list, to get the know the products and  
20 services that are out there as they begin to put  
21 together their report. What we tried to do is sort  
22 of help give some structures, some categories for

1 the kind of measures and services that are out  
2 there, and we offered one way of looking at it,  
3 which is that the survey that we did identified a  
4 variety of approaches that include solutions that  
5 go to subscriber agreements, right modeling, that  
6 address authentication and integrity, that include  
7 secure and containers and wrappers and  
8 clearinghouses, all of which we think are very  
9 vital to understanding the market for technical  
10 protection measures.

11           Again, we offer a framework for looking  
12 at all of these services and products, which is  
13 basically they fall into three categories, some of  
14 which can reflect more than one product. One  
15 category can reflect more than one product, because  
16 if they intend to focus on access control  
17 functions, music control functions, and tracking  
18 functions, and that these are, in fact, our view of  
19 the way to categorize most of the protection  
20 measures that you find out there.

21           As we indicated in our submission and is  
22 made clear in the Federal Register notice, this is

1 a report that is responsive to the TEACH Act which  
2 we were very involved in working with. We  
3 appreciated the work of the university community  
4 and others in the right holders community and  
5 certainly the Copyright Office, the Patent and  
6 Trademark Office and the key staff in Congress and  
7 what we think is a very solid piece of legislation  
8 that will help produce confidence as the on-line  
9 education, on-line learning element of our schools  
10 and university systems come further into play.

11 But we also think it's important to  
12 understand that technical protection measures have  
13 a very vital role in working with educational  
14 institutions. Educators, content providers, policy  
15 makers, and the high-tech industry have been  
16 partnering for more than two decades to bring the  
17 benefits of computer technology to the classroom.  
18 We're starting to see that pay off in very concrete  
19 ways. While the integration of technology as a  
20 teaching tool has been a gradual process, students  
21 of all ages are reaping benefits at an exponential  
22 rate.

1           The problem is that technology can  
2 challenge longstanding education models by  
3 including choice and empowerment and also  
4 simultaneously expand and reduce risks associated  
5 with illegal distribution or redistribution and  
6 misuse of copyrighted materials originally used for  
7 education purposes. That is one reason why SIIA  
8 and our member companies have been making  
9 considerable technology investments in recent years  
10 to respond to this need, all in the effort to  
11 provide better quality content and services to  
12 those in the market.

13           Every day new and improved technologies  
14 are being developed to protect copyrighted content  
15 and piracy. Just as educational institutions have  
16 integrated technologies into teaching and learning  
17 to facilitate the delivery of course curricula,  
18 under the TEACH Act, they must now also integrate  
19 technical protection systems into their distance  
20 education programs to protect copyrighted works  
21 used in its programs. We believe that these  
22 requirements are an essential component of the



1 TEACH Act that was signed into law.

2           Without the technical protection systems  
3 like those that we identified in our report, we're  
4 concerned that the copyrighted educational content  
5 used in distance education programs is likely to be  
6 illegally distributed and misused by students  
7 enrolled in the programs. When educators take  
8 advantage of new technologies to encourage use and  
9 access copyrighted content, they must keep in mind  
10 that end users generally do not know or do not care  
11 about protecting the copyrighted content.

12           Surveys support our concern. Almost 90  
13 percent of college administrators from over 600  
14 educational institutions surveyed reported having a  
15 written policy regarding software duplication. We  
16 think this is an important first step, but despite  
17 these best intentions, student software piracy  
18 rates remain very high. A recent study found that  
19 in 2002, 46 percent of college undergraduate  
20 students obtained their software illegally from  
21 family and friends. The number is down only  
22 slightly from the year before when 49 percent of

1 college undergraduate students obtained their  
2 software illegally.

3           These studies show that it is essential  
4 that any copyrighted content used in distance  
5 education programs be protected by robust detective  
6 technical protection systems combined with good  
7 policies like we're starting to see from the  
8 university and education community.

9           As any business can attest, technology  
10 costs are a dynamic budget item requiring continued  
11 investment in infrastructure, software, support,  
12 and training. Accredited non-profit educational  
13 institutions wishing to take advantage of the new  
14 distance education exemption to the TEACH Act  
15 should take steps to ensure that, one, these  
16 technical protection systems protect any  
17 copyrighted content used in the distance education  
18 program; two, budget for such technologies; and,  
19 three, continuously monitor the effectiveness and  
20 success rate of the technology used.

21           The TEACH Act was passed with the  
22 implied and expressing understanding that the

1 benefits to accredited non-profit educational  
2 institutions come with the sort of shared  
3 responsibilities in the form of the requirement to  
4 employ technical protection systems. We look  
5 forward to working with that community to ensure  
6 that the goals of the TEACH Act are carried out.

7                   Thank you very much. I'd like to  
8 participate in the further discussion.

9                   MR. KATOPIS: It's great to have you  
10 with us. Mark. Thank you very much for your  
11 comments.

12                   I think we're just going to turn to  
13 Michael for one last general question for the panel  
14 before we conclude for the morning.

15                   MR. SHAPIRO: Every panel needs one  
16 final question.

17                   One doesn't need to read too closely  
18 into the charge from Congress to see that Congress'  
19 gaze was closely on the present when they asked  
20 PTO to do a report on technological protection  
21 systems for digitized copyrighted works. However,  
22 equally clear in the report is that Congress is

1 interested in the near future, what will the future  
2 bring respect to either products available and  
3 standards.

4               So if anyone on the panel would care to  
5 share some thoughts with us on the future in this  
6 rapidly changing area on the product side or the  
7 standards side or perhaps any general comments,  
8 we'd be glad to hear them.

9               MR. MIRON: Without duplicating my prior  
10 remarks, I'll just recap. Later this year, there  
11 will be a formal international standard issued by  
12 M-PEG, and without betraying any nondisclosures  
13 that I have, I am aware of a number of large  
14 companies, including content owners, that are going  
15 to base products and services on those forthcoming  
16 standards, because many of them do have assets that  
17 cut across multiple media types and formats and  
18 they would like one way to express rights that's  
19 independent of them. They're also aware of  
20 developments of broad scale protection systems that  
21 will also enable new uses that incorporate the same  
22 thing for the same rationale.

1                   Since I am under MDA, I can't quite  
2   comment about who and what, but people can make  
3   they're own guesses.

4                   MR. DOW:   Like Michael, I don't want to  
5   duplicate earlier remarks, just to say that there  
6   is a lot of work that is going only with the focus  
7   on near- and long-term future, and some of this is  
8   touched upon in my written remarks.   I think that  
9   the work that is ongoing now in CPTWG falls into  
10  that category, and we'd be happy to help facilitate  
11  discussions with that group and the people that are  
12  active in it, to the extent that's helpful with  
13  you, as well as a number of the standards setting  
14  bodies that I referred to in my written comments.  
15  To get into the details of them would take quite  
16  some time and probably I'm not qualified do it, but  
17  as I said, I'd be more than happy to try to help  
18  facilitate a discussion with the right people for  
19  that.

20                  MR. POTASH:   I recently attended a  
21  consumer electronics show just last month in Las  
22  Vegas where I had the opportunity to see the next

1 generation of digital devices, mobile appliances,  
2 and business interests that are converging to  
3 create very large marketplaces for premium  
4 copyrighted intellectual property, and based on  
5 that, the proliferation of portable devices such as  
6 pocket PC or Palm or Sonys, the expansion of  
7 capability of mobile phones as a delivery mechanism  
8 now for images and sound and music and text are all  
9 creating an even more vibrant marketplace that is  
10 driving the services and digital rights managements  
11 community to look at a much bigger opportunity to  
12 delivery copyright protected works in a secure  
13 manner to a mobile marketplace.

14               We know already 30 percent of the cell  
15 phones in Japan have cameras built in and images  
16 are being projected. That's already a platform for  
17 watching trailers and videos and movies.

18               So we expect that the major technology  
19 platforms such as Microsoft Corporation, the  
20 broadband and telecom industries that are looking  
21 to proliferate usage of their transmission and  
22 broadcast capabilities will create an even more

1 exciting marketplace for technology solutions for  
2 copyrighted works that will benefit the educational  
3 community as a byproduct.

4 MR. KREPICK: I agree with Steve. I  
5 think that we're really just at the start of having  
6 sort of widespread deployment of various digital  
7 rights management technologies and for using them  
8 in different areas of application, whether it's in  
9 the TEACH areas or sort of the more traditional  
10 commercial areas. I think what we've seen with our  
11 customers is--and many of them are SIIA  
12 members--that they are kind of just getting started  
13 with some of this technology. I think there have  
14 been--there probably will be experiences over the  
15 next year or so in terms of rolling out these  
16 technologies where many companies will learn very  
17 quickly.

18 I think this whole area of rights  
19 management certainly is a sensitive area. It's  
20 like a lightening rod in terms of the eliciting  
21 consumer response, hardware company response, and  
22 the like, but I think that kind of the horse is out

1 of the barn. I think people have realized that we  
2 are in this digital world, this digital media, and  
3 that in order to extend it into the future and to  
4 get more content to consumers, to get more content  
5 to students and the like, that that content really  
6 does have to be protected, and I think that you'll  
7 see much more rapid accelerated widespread  
8 deployment of a lot of different types of digital  
9 rights management solution over the coming years,  
10 and I think you'll see that there will be fits and  
11 starts.

12 I think that not everything is not going  
13 to be rolled out smoothly. Not every company is  
14 going to put together in advance the kind of  
15 customer support that they probably really need to  
16 answer consumer questions on, Gee, I tried to use  
17 this and I wasn't able to and how come I got locked  
18 down to this computer; I wanted to shift it over to  
19 another computer. All the technologies have the  
20 capability to satisfy these needs, but I think we  
21 really are in a learning game over the next couple  
22 of years, and I think that will roll out and come



1 to pass, but I think the major, major thing that  
2 we're seeing in the marketplace is sort of a  
3 dedicated commitment on the part of the rights  
4 owners to really do something about it and to  
5 implement these technologies.

6 MR. BOHANNON: Chris, I would just add I  
7 wholeheartedly agree with everything that's been  
8 said. I think it's important to understand that  
9 while, you know, there are obviously efforts  
10 regarding motion picture recording, what we see is  
11 in fact the application of technical measures in a  
12 variety of market circumstances. I think certainly  
13 those discussions regarding the motion picture  
14 recording content are very important, obviously big  
15 stakes, but the bigger story about how particular  
16 sectors, particular products that are not as high  
17 profile are implementing technical protection  
18 measures, as often is not, particularly in the  
19 business-to-business context, those measures ensure  
20 that the users are getting what they want and can  
21 rely on what they want. I think that's a piece of  
22 this discussion that, quite frankly, applies to

1 recording motion pictures as well, that's missing  
2 here.

3           Obviously, there's the rights holders in  
4 ensuring that their investment are not pirated and  
5 stolen. There's another side to this equation, is  
6 that these kinds of measures help build confidence  
7 in a content and information and software that is  
8 increasing delivered not just on a CD, but over the  
9 internet through services and through other  
10 delivery mechanism that I think is going to be  
11 very, very important in this discussion, and we're  
12 seeing at a business-to-business level where I  
13 think there's a more dynamic and sophisticated  
14 level going on that's a little bit out of the  
15 education market, so I'm gearing away from my  
16 comments, where the users want to know that what  
17 they're paying for is what really what--that they  
18 can trust it, there's integrity to it, and they  
19 know what they're getting.

20           But as I said, I think, as the last  
21 commenter said, there are going to be fits and  
22 starts. That doesn't mean that there's a major

1 obstacle. That's just part of getting new products  
2 out in the market and in a coherent and real way,  
3 and our industry looks forward to working with all  
4 the stakeholders to ensure that those  
5 implementations get done in the most effective way  
6 possible.

7 MR. KATOPIS: Mark, for purposes of the  
8 record, could you explain who the SIIA members,  
9 your constituency, is? Are you strictly business  
10 software or are you educational consumer? Are you  
11 video games? Are you--who are you?

12 MR. BOHANNON: As our submission said,  
13 we have about 650 members companies that  
14 operate--that are located around 20 countries now,  
15 and all the members are on the website, but our  
16 members produce software code and information  
17 content for business consumers, entertainment,  
18 internet, and education. I hate to--you know, some  
19 of our members are on this panel, so I want to  
20 acknowledge them, but we do also include a number  
21 of major software developers like Oracle, Sun,  
22 Novell, Intuit, Cybase, Corell. On the information

1 side, we include McGraw-Hill, Thompson, Dow Jones  
2 Interactive. Many those are using technological  
3 protection measures in a very effective ways to get  
4 real meaningful content out to users and to also  
5 manage software.

6 So I use those as just examples. I  
7 don't--you know, when you have 650 members, you  
8 don't want to exclude, but those are the kind of  
9 companies that we represent.

10 MR. KATOPIS: Anyone else care to add  
11 anything before we adjourn?

12 IX. CONCLUSION

13 MR. KATOPIS: Well, every panel really  
14 needs a conclusion, in my opinion, and before I let  
15 everyone go, I just want to thank all the  
16 participants and everyone in the audience on behalf  
17 of Under Secretary James Rogan and Deputy Under  
18 Secretary John Dudas. You will find the  
19 submissions pursuant to the Federal Register notice  
20 as well as the comments from today at our website,  
21 WWW.USPTO.Gov. The report, pursuant to the TEACH  
22 Act, will be finally available in a few months.

1 May 2nd is the statutory deadline.

2                   We appreciate the opportunity to  
3 continue this dialogue today and perhaps in the  
4 future. Just as a clarification, public comments  
5 filed are currently on the website. I think we  
6 have 14 submissions.

7                   And the comments today will be posted?

8                   MR. SHAPIRO: We don't have them at hand  
9 now, and that has not been a requirement.

10                  MR. KATOPIS: Okay. What Michael has  
11 explained is that to the degree that the comments  
12 today become available, we would like to put them  
13 on the website.

14                  But again, thank you all for your  
15 participation, and this is not the final word on  
16 DRM and everything happening in this exciting area,  
17 and we appreciate everyone's help as we move  
18 forward in our attempt to satisfy the statutory  
19 requirement. So thank you all and have a good day.

20                  [Whereupon, at 11:16 a.m., the meeting  
21 was adjourned.]

22